

TROPICAL RAINFALL MEASURING MISSION

October 16, 2000 – October 22, 2000

DOY 290 - 296

Day of Mission 1054 - 1060

TRMM MISSION OPERATIONS

- TRMM is flying in the -X Forward direction as of October 1st (00-275) at 08:51:45z.
- Yaw maneuver #48 is scheduled for October 27th (00-301).
- Delta-V #240 is scheduled for October 25th (00-299), using the ISP thrusters.
- The Beta angle range for 00-297 to 00-303 is -24.5° to $+3.6^{\circ}$
- The next Monthly Status Review (MSR) is scheduled for November 1st (00-306).
- The next End of Life Planning meeting is scheduled for October 25th (00-299).
- The next Flight Software CCB meeting is scheduled for October 31st (00-305).
- 70 days remain until Extended Mission science operations begin on January 1st, 2001.

TRMM SUBSYSTEM OPERATIONS

Attitude Control System (ACS)

00-291 (Tuesday, October 17th)

Delta-V maneuver #237 was successfully conducted at 16:05:59z and 16:51:46z for durations of 28.500 and 21.500 seconds respectively, using the ISP thrusters. The off-modulation of the -Pitch thruster (#6) for burn 1 and 2 was 39.5% and 37.2% (60.5 and 62.8% on time). The remaining fuel is 513.956 kg, and the final apogee and perigee height is 354.77 km x 347.59 km.

00-293 (Thursday, October 19th)

Delta-V maneuver #238 was successfully conducted at 15:28:23z and 16:14:10z for durations of 26.375 and 11.625 seconds respectively, using the ISP thrusters. The off-modulation of the -Pitch thruster (#6) for burn 1 and 2 was 34.2% and 35.5% (65.8 and 64.5% on time). The remaining fuel is 513.067 kg, and the final apogee and perigee height is 354.81 km x 347.54 km.

00-296 (Sunday, October 22nd)

Delta-V maneuver #239 was successfully conducted at 15:01:44z and 15:47:33z for durations of 40.000 and 22.875 seconds respectively, using the ISP thrusters. The off-modulation of the -Pitch thruster (#6) for burn 1 and 2 was 38.4% and 35.5% (61.6% and 64.5% on time). The remaining fuel is 511.605 kg, and the final apogee and perigee height is 355.00 km x 347.56 km.

Flight Data System (FDS)/Command & Data Handling (C&DH)

The UTCF was adjusted by $-929.6 \mu\text{s}$ to 31535996.836538 seconds at 23:35:40 on 00-291. The current drift value is $-513.5 \mu\text{s}$. The frequency standard offset remains x'7a2' with a current drift rate of $-4.33 \mu\text{s/hr}$.

An Invalid Stream Id was received by XS on 00-294 at 18:43:41z.

PSIB-A normal packet counts were removed from telemetry on October 20th (00-294) for 1/1k events.

Reaction Control Subsystem (RCS)

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

Power Subsystem

The Power subsystem performed nominally during this period. New RTS 21 and TSMs have been completed, and are awaiting testing before implementation.

Electrical Subsystem

The Electrical subsystem performed nominally during this period.

Thermal Subsystem

The Thermal subsystem performed nominally during this period.

Deployables Subsystem

The Deployables subsystem performed nominally during this period.

RF/Communications Subsystem

The RF/Communications subsystem performed nominally during this period.

SPACECRAFT INSTRUMENTS

CERES

CERES remains powered OFF, following the original PSIB anomaly loadshed on September 16th (00-261).

LIS

The LIS instrument performed nominally during this period.

PR

The PR instrument performed nominally during this period. A PRLNAANALYSIS Low Noise Amplifier check was performed at 16:25z on 00-293. The list of Internal Calibration times over Australia in which PR was not radiating is shown below:

2000-290/09:58:54 - 10:03:15z	2000-290/18:03:14 - 18:05:21z
2000-291/16:52:01 - 16:54:11z	2000-292/09:09:59 - 09:15:04z

2000-292/15:40:36 - 15:42:50z	2000-293/16:03:09 - 16:05:17z
2000-294/08:21:50 - 08:24:20z	2000-294/14:52:07 - 14:54:20z
2000-295/15:14:46 - 15:16:54z	2000-296/14:03:05 - 14:05:16z

TMI

The TMI instrument performed nominally during this period.

VIRS

The VIRS instrument performed nominally during this period. VIRS performed a self reset on 00-291 at 14:19:09z.

GROUND SYSTEM

The TRMM Special Test and Training Facility (STTF) located in GSFC Building 1 has been experienced hardware problems since October 12th. The MOC is now able to command the STTF, but commands from the test facility workstation are still not reaching the simulator. Testing of the new Power Subsystem RTS #21 and TSMs 37-40 cannot be completed until this problem is resolved. Code 582 (Flight Software Branch) is working with the TRMM Flight Software Maintenance team to troubleshoot and repair the problem as quickly as possible.

Event Reports

ER #211: On 00-290 (October 16th) the MOC experienced data drop outs on a 171/SSA1 event between 10:06:36z through 10:06:52z, all data was recovered.

ER #212: On 00-294 (October 20th) the MOC experienced a late acquisition due to an erroneous LTS configuration. The lines were not correctly reconfigured from the previous 1/1k event, and all data was recovered.

Generic Late Acquisition Reports (for TTRs 19639)

No new Generic Late Acquisition reports were generated during this period.

New Anomalies

No new Anomalies occurred during this period.

Recurring/Open Anomalies

No open anomalies recurred during this period.

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